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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,024	01/15/2002	Ytsen Wielstra	NL010052	5698

24737 7590 05/18/2005

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

METZMAIER, DANIEL S

ART UNIT PAPER NUMBER

1712

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,024

Applicant(s)

WIELSTRA ET AL.

Examiner

Daniel S. Metzmaier

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/23/04 & 2/24/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-11 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 15, 2004 has been entered.

Claim Objections

2. Claim 11 is objected to because of the following informalities: claim 11 is not in sentence format since it lacks a period. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Phillipp et al., 4,546,366. Phillipp et al (examples 6 and 7) disclose the stirring of the reaction mixture comprising an organosilane and a metal alkoxide under basic conditions with silica. Although the method contains additional steps such as filtering, said steps are not excluded by applicants claimed transitional language, "comprising".

Furthermore, Phillipp et al (column 4, line 24, to column 5, line 3) discloses multiple step additions provided the system still has liquid consistency, an optional precondensation step, the addition of conventional lacquer additives including fillers (column 4, line 68, to column 5, line 3).

To the extent the reference differs from the claims in the "adding" the silica to the reaction mixture, Phillipp et al makes no distinction whether the silica is added to the reaction mixture or the reaction mixture is added to the silica.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to select any order of performing steps in the absence of new or unexpected results as a point of law. See MPEP § 2144.04(IV)(C).

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to further employ conventional additives including fillers, which would include silica.

Claim 3, while not specifically recited, Phillipp et al teaches ketone solvents and conventional alkoxides. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to further employ ketone alkoxy groups for the advantage of compatibility and solubility with the ketone solvents.

7. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JSR Corporation, EP 1 022 318 A2, in view of Phillipp et al., 4,546,366. JSR Corp (Tables 8-10, 13, paragraphs [0146] and [0152] et seq) discloses coating compositions employing silica, organosilane and metal alkoxide.

JSR Corp differs from the claims in the characterization of the pH of the compositions as under basic conditions.

JSR Corp (paragraph [0152] to [0159] and [0162]) discloses the use zirconium, titan and aluminum alkoxides as agents to increase the speed of curing as well as alkali compounds, basic compounds and amine compounds, which would have resulted in the method of adding under basic conditions.

JSR Corp (paragraph [0162]) further teaches the component (f), which may include the metal alkoxides, may be in the form of a combination of two or more substances.

Phillipp et al (examples 6 and 7) disclose the stirring of the reaction mixture comprising an organosilane and a metal alkoxide under basic conditions with silica. Phillipp et al (column 4, lines 3-16) clearly discloses the use of basic condensation catalyst.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ basic curing agents as alkali compounds, basic compounds and amine compounds; which are known to be basic and would be expected to result in a basic composition. Said curing agents are known in the art as condensation catalyst conventionally known in the art as shown by the Phillipp et al reference for closely related lacquer systems.

Regarding claims 2 and 3, JSR Corp (paragraph [0152] and [0159]) discloses the metal diketonates of said zirconium, titanium and aluminum metals. Regarding claims 4, 5 and 6, please see Tables 8-10 and 13 of JSR Corporation.

Regarding claims 8-11, the components are disclosed in the JSR Corp references for their use in coating substrates for the advantage resisting fouling, durability and transparency.

8. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Philips Electronics N.V., WO 98/22548, in view of JSR Corporation, EP 1 022 318 A2, and Phillipp et al., 4,546,366.

Philips Electronics (examples, esp. example 5) discloses lacquer compositions comprising GLYMO (epoxysilane), TEOS, LUDOX TM (alkaline stabilized silica) and maleic acid.

Philips Electronics differs from the claims in the further addition of a metal alkoxide and the explicit characterization of the compositions under basic conditions.

Philips Electronics (page 6, lines 22 et seq) discloses the addition of metal alkoxides in addition to TEOS.

JSR Corp (Tables 8-10, 13, paragraphs [0146] and [0152] et seq) discloses coating compositions employing silica, organosilane and metal alkoxide.

JSR Corp (paragraph [0152] to [0159] and [0162]) discloses the use zirconium, titan and aluminum alkoxides as agents to increase the speed of curing as well as alkali compounds, basic compounds and amine compounds, which would have resulted in the method of adding under basic conditions.

JSR Corp (paragraph [0162]) further teaches the component (f), which may include the metal alkoxides, may be in the form of a combination of two or more substances.

Regarding claims 2 and 3, JSR Corp (paragraph [0152] and [0159]) discloses the metal diketonates of said zirconium, titan and aluminum metals. Regarding claims 4, 5 and 6, please see Tables 8-10 and 13 of JSR Corporation.

Regarding claims 8-11, the components are disclosed in the JSR Corp references for their use in coating substrates for the advantage resisting fouling, durability and transparency.

Phillipp et al (examples 6 and 7) disclose the stirring of the reaction mixture comprising an organosilane and a metal alkoxide under basic conditions with silica. Phillipp et al (column 4, lines 3-16) clearly discloses the use of basic condensation catalyst.

These references are combinable because they teach coating compositions. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ metal alkoxides such as those taught in the JSR Corp or the Phillipp et al reference and the basic curing agents as alkali compounds, basic compounds and amine compounds; which are known to be basic and would be expected to result in a basic composition conventionally known in the art as shown by the Phillipp et al reference for closely related lacquer systems and compatible with the basic Ludox TM.

Response to Arguments

9. Applicant's arguments filed February 24, 2005 have been fully considered but they are not persuasive.

10. Applicants assert that the JSR reference teaches equally the use of the metallates, acids, and basic materials as component (f). It is thereafter concluded that JSR provides no motivation to combine the metallates the basic compounds. It is asserted that one skilled in the art could have equally chosen also the use of acids, or a combination of acids and bases resulting in neutral systems. JSR clearly (paragraph [0162]) contemplates mixtures. JSR further teaches ([0157]) the partial hydrolysates as well. JSR further ([0150]) teaches component (f) is a catalyst.

It is known in the art that metal alkoxides are basic upon self hydrolysis and the said hydrolysis is catalyzed both by acid or base. Since each of the catalyst are taught in the alternative and in combination, applicants have proffered no evidence to contradict said teaching, one skilled in the art would have reasonably expected the alternative to the base with metal alkoxide to also catalyze the reaction systems; It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the combination of the metal alkoxides with base as component (f) in the JSR coatings.

11. Applicants assert the Phillips Electronics reference teaches acid catalyst rather than base catalyst and the use of a base taught in the JSR teaching is in direct conflict therewith. This has not been deemed persuasive since it is well known that hydrolysis-condensation reaction are catalyzed by both acids and bases as shown in the JSR reference. Applicants have not shown the claimed invention to be unobvious over the teachings of the prior art.

12. Applicants assert the examiner has cited no other prior art in support of the use of a basic curing agent and/or catalyst. Please see Phillipp et al reference cited in the rejections above as exemplifying basic condensation catalyst in lacquer systems having an organosilane and a metal alkoxide and silica.


13. To the extent instant comparative example 9 is relied as evidence of unexpected results, said example is not commensurate in scope with the claimed invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM